REMARKS

Claims 1-16, and 18 stand rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The basis of this rejection is set forth in a two prong test of:

1. Whether the invention is within the technological arts; and

2. Whether the invention produces a useful, concrete, and tangible result.

For a claimed invention to be statutory, the claimed invention must be within the technological arts. Mere ideas in the abstract (i.e., abstract ideas, law of nature, natural phenomena) that do not apply, involve, use, or advance the technological arts fail to promote the "progress of science and the useful arts" (i.e., physical sciences as opposed to social sciences for example), and therefore are found to be non-statutory subject matter. For a process claim to pass muster, the recited process must somehow apply, use, or advance the technological arts.

For claims 1-16, and 18, the claims do not recite or require the use of any technology and are not considered to be within the technological arts. A person could perform all of the recited steps with no technology at all. The claim is also reciting nothing more than an abstract idea because the steps recited cover every possible conceivable way of actually performing the steps. Abstract ideas are specifically considered to be non-statutory under 35 U.S.C. 101.

The USPTO Training Materials on 35 U.S.C. 101 prepared by Vincent Millin, Tariq Hafiz, Jim Trammell and Robert Olszewski, all of whom are SPEs in Technology Group 3600, teach, on pages 8 and 9, that "When an abstract idea is reduced to a practical application, the abstract idea no longer stands alone if the practical application of the abstract idea produces a useful, concrete and tangible result. This then satisfies the requirement of 35 U.S.C. *In re Alappat.*, 31 USPQ 2d 1545, 1558 (Fed. Cir. 1994); *State Street Bank & Trust Co. v. Signature Financial Group, Inc.*, 47 USPQ2d 1596, 1601-02 (Fed. Cir. 1998)."

Claim 1 (currently amended) is a method [criterion #1 - a process] that in part reads "a lease guarantor to evaluate a potential renter for purposes of providing access to leased housing to the potential renter." Claim 1 now satisfies both criteria. The invention is a process having a useful, concrete and tangible result [criterion #2] (i.e., that of ...evaluating a potential renter...). The rejection under 35 U.S.C. 101 is respectfully overcome in light of the citations and the amendment, as both criteria are met. The reference is entered into the prosecution record.

Claims 1-20 stand rejected by Examiner under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter, which applicant regards as the invention.

For claim 1, what is the scope of "who does not qualify against conventional leasing standards"? This term is considered to be vague and indefinite because it is not known what "standards" are considered to be conventional and which are not. This is not a definite thing. With respect to the recited "modified credit check", this is unclear in that it is not known what is meant by "modified". This has just been interpreted to be a credit check because it is not known what the term "modified" does to the credit check.

For claim 5, what is meant by "a cost of living index as of a predetermined time"? What time? What is the index? This is indefinite, as the scope is not known.

Applicant has currently amended Claim 1 to address the rejection under 35 U.S.C. 112. As amended, claim 1 definitively describes that the invention is addressing a "lease without a lease guarantor" versus a "lease with a lease guarantor". The phrase "modified credit check" has been amended to read, "credit check". As Examiner is aware, with a credit check, there can be some variation in the thoroughness of the credit check, and the term "modified" does refer to a specific type of credit check. The Examiner has not identified any other claims rejected under 35 U.S.C. 112.

Claims 2 and 20 are currently amended deleting the term "modifying".

Claim 5 is currently amended to address the 35 U.S.C. 112 rejection. The phrase "as of a predetermined date", has been deleted. The phrase "adjusted by the cost of living index" is a generally accepted equivalent term for inflation, and there should no longer be any indefiniteness.

In light of the amendments to claims 1, 2, 5, and 20, Applicant believes all the 35 U.S.C. 112 rejections have been corrected.

Claims 1-20 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Weatherly et al. (6049784) in view of ATS, Inc. web site.

For claims 1 and 7, Weatherly et al. disclose a lease guarantor that will provide a lease warranty to a landlord in the event that a renter has defaulted on their rent. Column 4, lines 25-33, disclose that the renter must qualify for the lease warranty by satisfying guarantor set criteria. The criteria are used to set the level of risk that the guarantor is willing to accept with a prospective renter. Weatherly et al. disclose that the renter is checked-out by doing a credit check and an employment check as claimed. Column 4, line 66 and column 5, line 9, disclose the warranty and how the payments can be structured. Weatherly et al. do not disclose that a criminal background check is performed on the prospective renter. ATS, Inc. disclose a web site/company that offers landlords, realtors, property managers, etc., with a prospective tenant screening service. ATS, Inc. will perform background checks that include an employment check and a credit check as Weatherly et al. disclose, but ATS, Inc. also disclose that a criminal background check is also performed. It would have been obvious to one of ordinary skill in the art at the time the invention was made to perform a criminal background check on a prospective tenant to discover if they were a convicted criminal and for what they were convicted. A landlord would surely want to know if a convicted child sex offender was applying to rent an apartment in a building that also housed a lot of kids. A criminal background check would have been obvious to one of ordinary skill in the art as taught by ATS, Inc., which was representative of the state of the art prior to the invention of the instant application.

Applicant finds that a pivotal element of the invention as claimed in claim 1, a "lease guarantor", is not cited in Weatherly et al., or in ATS, Inc. Nor do Weatherly et al. or ATS, Inc. teach the use of a "lease warranty", where the lease guarantor provides some protection for a portion of financial risk to a landlord for renting to a renter who would not otherwise qualify for a lease. While both Weatherly et al. and ATS, Inc. teach qualifying a renter, the level of qualification is not mitigated by a lease warranty being issued by a lease guarantor. The lease warranty gives the landlord much more flexibility in the qualification, as the lease guarantor accepts at least some portion of the financial risk of renting to a risky tenant. Applicant's claim 7 is a dependent claim depending from claim 1, and defines a level of risk as, "at least a portion of the remaining rent of the lease after default". Weatherly et al. (column 4, line 66-column 5, line 9) reads on why a potential tenant was declined, not a method of defining what is the level of shared risk might be.

The Examiner goes on to reject the remaining claims, claims 2-6 and 8-19, for similar reasons, all directed at the process of qualifying a renter.

Applicant's qualification is for the purpose of establishing the level of risk, and then establishing the cost of a lease warrant, or how a default lease would be collected. The cited references do not address these dependent claims in light of parent claim 1.

For claim 20, Weatherly et al. disclose that a computer is used to make the process automated, as far as data receipt from landlords to monitoring the payments of rent with computers. The 35 U.S.C. 103(a) rejection provides for all of the recited checks being performed. Not disclosed is that the results are used by a computer program to determine if the renter does or does not qualify. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a computer to compare the results of the background checks and other tenant data with criteria thresholds to automatically determine whether or not a potential renter qualifies. Instead of a person having to review all of the applications to determine if someone qualifies or not, a computer program would be used to do the comparison automatically. This is just the automation of a manual actively widely

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recognized by the prior art (*In re Venner*, 262 F.2d 91, 95, 120 USPQ 193, 194 (CCPA 1958)). With respect to the output of a fee agreement, this is taken as the guarantor contract itself, either in electronic or hard copy form. If the renter qualifies and you are entering into a contract with the renter, it is considered obvious to print out a hard copy to be signed, or an electronic copy. The output of the list of landlords who will accept the renter are present in Weatherly et al. because when you print the contract itself, it includes the name of the landlord that is willing to accept the renter. The Examiner assets that Weatherly et al. teach "a list of landlords."

Applicant's claim 20 is merely a method of automating claims 11, 9, 7, 6, 5, 3, and 2, which depend on independent claim 1. The 35 U.S.C. 103(a) rejection has to teach all the elements, and again this is lacking, as multiple elements claimed in claim 1 are not cited in the references. A "lease guarantor" is not cited in Weatherly et al., or in ATS, Inc. Nor do Weatherly et al. or ATS, Inc. teach the use of a "lease warranty", where the lease guarantor provides some protection for a portion of financial risk to a landlord for renting to a renter who would not otherwise qualify for a lease.

The rejections of claims 1-20 are respectfully traversed.

Conclusion

Applicant would like to thank Examiner for the attention and consideration accorded the present Application. Should Examiner determine that any further action is necessary to place the Application in condition for allowance, Examiner is encouraged to contact undersigned Counsel at the telephone number, facsimile number, address, or email address provided below. It is not believed that any fees for additional claims, extensions of time, or the like are required beyond those that may otherwise be indicated in the documents accompanying this paper. However, if such additional fees are required, Examiner is encouraged to notify undersigned Counsel at Examiner's earliest convenience.

Respectfully submitted,

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Patent Agent for Appellant
Registration No. 29,618
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35 U.S.C. 101 Training Materials

Presented by

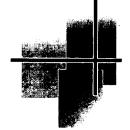Vincent Millin, Tariq Hafiz, Jim Trammell and Robert Olszewski

SPE 3600

UNITED STATES
PATENT AND
TRADEMARK OFFICE

35 U.S.C. Section 101 reads:

"Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title."

Translation:

35 U.S.C. 101 defines statutory subject matter as "any new and useful process, machine, manufacture or composition of matter, or any new and useful improvement thereto."

Anything Under the Sun......

The Supreme Court acknowledged that Congress, through legislative history, intended statutory subject matter to *"include anything under the sun that is made by man." See Diamond v. Chakrabarty,* 447 U.S. 303, 309; 206 USPQ 193, 197 (1980).

Exceptions

Despite the apparent sweep of Section 101, the Supreme Court has specifically identified three categories of nonstatutory subject matter:

- laws of nature
- natural phenomena, and
- abstract ideas.

These are not categories of invention. See *Diamond v. Diehr*, 450 U.S. at 175, 209 USPQ 1 (1981).

Mathematical Algorithms *per se*

Mathematical algorithms *per se* that stand alone and are not reduced to a practical application represent nothing more than an abstract idea.

From Abstract Idea to Patentable Subject Matter

Practical Application

When an abstract idea is reduced to a practical application, the abstract idea no longer stands alone if......

Useful, Concrete and Tangible
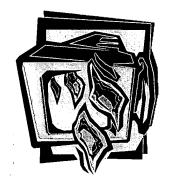
...the practical application of the abstract idea produces a **useful, concrete and tangible result.** This then satisfies the requirements of 35 U.S.C. 101. *In re Alappat.,* 31 USPQ 2d 1545, 1558 (Fed. Cir. 1994); *State Street Bank & Trust Co. v. Signature Financial Group. Inc.,* 47 USPQ2d 1596, 1601-02 (Fed. Cir. 1998).

State Street Bank & Trust Co. v. Signature Financial Group Inc.

The Invention:
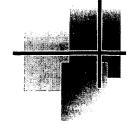
The patent claims recite a data processing system for implementing a hub and spoke investment structure to maximize return on investment while minimizing tax liability. The system transforms data, representing discrete dollar amounts, into a final share price using a machine (computer) that makes a series of mathematical calculations.

State Street – The Bottom Line
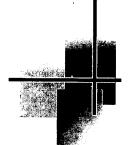
The Courts held that a machine (computer) programmed to transform data which represents discrete dollar amounts into a final share price through a series of mathematical calculations does, in fact, constitute the practical application of a mathematical algorithm, formula, or calculation because it produces "a useful, concrete and tangible result" i.e. the final share price upon which investors and their brokers can make investment decisions. *See State Street*, 149 F.3d at 1374-75, 47 USPQ 2d at 1602.

More on State Street

A process, machine, manufacture, or composition of matter employing a law of nature, natural phenomenon, or abstract idea may be patentable subject matter even though a law of nature, natural phenomenon, or abstract idea would not, by itself, be entitled to such protection. See *State Street.*

AT&T Corp. v. Excel Communications, Inc.

The Invention:
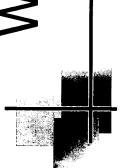
The patent claims a process that uses Boolean algebra to derive a value that is used to generate a message record (PIC) of long distance telephone calls between subscribers and their call recipients, that value being used to create a signal useful for billing credit purposes when the caller and the call recipient both subscribe to the same long distance carrier.

AT&T - The Bottom Line

The Court held that the claims constituted patentable subject matter under 35 U.S.C. 101 even though the billing value was derived using a simple Boolean mathematical principle. The Court noted that the patent does not claim the Boolean principle nor try to preclude its use in any other application, and that the "process applies the Boolean principle to produce a useful, concrete, tangible result without preempting other uses of mathematical principle." See *AT&T Corp. v. Excel Comm. Inc.* 50 USPQ2d 1447, 1452 (Fed. Cir. 1999). The useful result is lower long distance bills when calling people who use the same long distance service provider.

What Does All This Mean??

An abstract idea by itself never satisfies the requirements of 35 U.S.C. 101.

However...

...an abstract idea when practically applied to produce a useful, concrete and tangible result satisfies Section 101.

Can Have More than One Practical Application

Applicant may assert more than one practical application, but only one is necessary to satisfy the utility requirement under 35 U.S.C. 101.

Steps carried Out in the Human Mind OK if Useful, Concrete and Tangible Result Produced

A method or process remains statutory even if some or all of the steps therein can be carried out:

❖ in the human mind

❖ with the aid of the human mind, or

❖ because it may be necessary for one performing the method or process to think. *In re Musgrave,* 431 F.2d 882, 893; 167 USPQ 280, 289 (CCPA 1970)
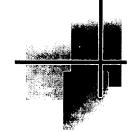
The key is that a useful, concrete and tangible result must be produced.

The Test for Patent Eligibility

The fundamental test for patent eligibility is to determine whether the claimed invention produces a "useful, concrete and tangible result." The test for practical application as applied by the examiner involves the determination of the following factors:

"Useful"
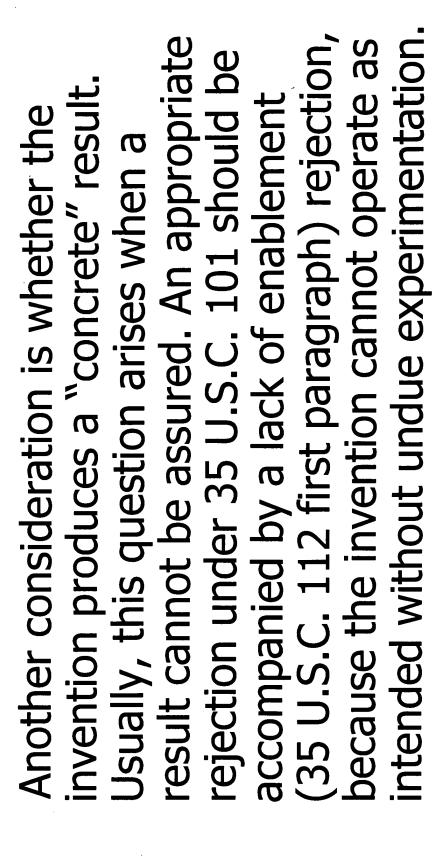
The Supreme Court in *Diamond v. Diehr* requires that the examiner look at the claimed invention as a whole and compare any asserted utility with the claimed invention to determine whether the asserted utility is accomplished. Applying utility case law the examiner will note that:

(a) the utility need not be expressly recited in the claims, rather it may be inferred;

(b) if the utility is not asserted in the written description, then it must be well established;

(c) a specific, substantial and credible utility must be accomplished.

"Concrete"

Another consideration is whether the invention produces a "concrete" result. Usually, this question arises when a result cannot be assured. An appropriate rejection under 35 U.S.C. 101 should be accompanied by a lack of enablement rejection (35 U.S.C. 112 first paragraph) rejection, because the invention cannot operate as intended without undue experimentation.
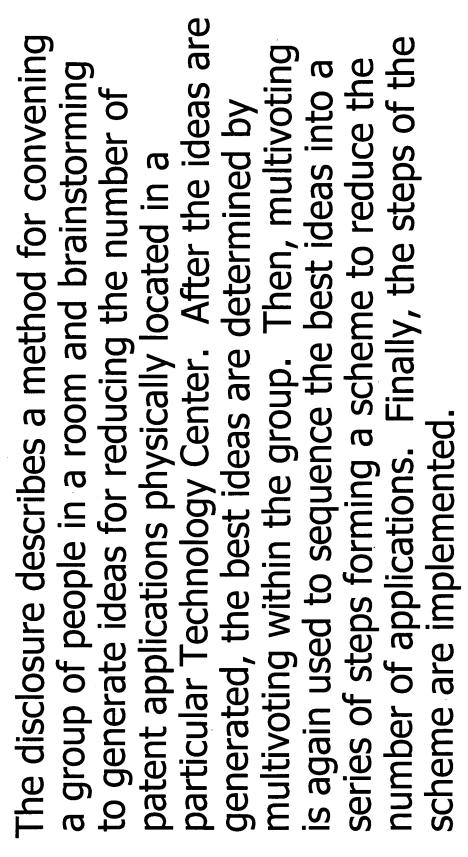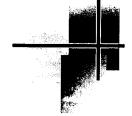
"Tangible"

Applying *In re Wamerdam*, 33 F.3d 1354; 31 USPQ2d 1754 (Fed. Cir. 1994), the examiner will determine whether there is simply a mathematical construct claimed, such as a disembodied data structure and method of making it. If so, the claim involves no more than a manipulation of an abstract idea and therefore, is nonstatutory under 35 U.S.C. 101. In contrast, a claimed computer-readable medium encoded with a data structure defines structural and functional interrelationships between the data structure and the computer software and hardware components which permits the data structure's functionality to be realized, and is statutory.

Example of Useful, Concrete and Tangible

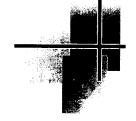The disclosure describes a method for convening a group of people in a room and brainstorming to generate ideas for reducing the number of patent applications physically located in a particular Technology Center. After the ideas are generated, the best ideas are determined by multivoting within the group. Then, multivoting is again used to sequence the best ideas into a series of steps forming a scheme to reduce the number of applications. Finally, the steps of the scheme are implemented.

Example (cont.)

Claim 1. A method comprising the steps of:

(a) convening people in a room; and

(b) brainstorming to generate a series of steps forming a scheme for reducing the number of patent applications pending in the Technology Center.

Example (cont.)

<u>Analysis of claim 1:</u>

The claim merely manipulates an abstract idea without producing a "useful, concrete and tangible result." Claim 1 would be rejected under 35 U.S.C. § 101 as being directed to nonstatutory subject matter. C.f. *In re Schrader.*, 30 USPQ2d 1455 (Fed. Cir. 1994) and *In re Wamerdam,* especially claims drawn to a method of making a disembodied data structure in *Wamerdam.*

Example (cont.)

Claim 2. The method of claim 1, further comprising the step of:

(c) prioritizing ideas in formulating the scheme.

Analysis of claim 2:

Claim 2 does not produce a useful, concrete and tangible result. The claim is nonstatutory.

Example (cont.)

Claim 3. The method of Claim 1, further comprising the step of:

(c) implementing the steps of the scheme.

<u>Analysis of claim 3:</u>

If the utility can be assured, then the method produces a concrete, tangible and useful result. If the result is speculative and it would require undue experimentation to produce the concrete result, claim 2 would be rejected both under 35 U.S.C. § 101 and § 112, 1st paragraph [lack of enablement].

Functional vs. Non-Functional Descriptive Material

Functional Descriptive Material

- *per se* is not statutory. C.f. *In re Wamerdam,* disembodied data structure claim.

- In combination with a computer readable medium so as to be capable of producing a useful, concrete and tangible result when used in a computer system is statutory i.e., a set of instructions in combination with a computer system. C.f. *In re Wamerdam* - data structure stored in a computer memory, and *In re Lowery, 32 USPQ2d 1031 (Fed. Cir. 1994)* - data structure in a computer readable medium.

Translation:

A claim to a computer readable medium encoded with functional descriptive material that can function with a computer to effect a practical application that results in a useful, concrete an tangible result (i.e. running an assembly line or executing a stock transaction) satisfies Section 101. See U.S. Patent 5,710,578 to Beauregard et al.

Examples of Statutory Functional Descriptive Material

- A claimed computer-readable medium encoded with a functional data structure – this defines structural and functional relationships between the data structure and the hardware/software components. See *Wamerdam.*

- A claimed computer-readable medium encoded with a computer program – this defines structural and functional relationships between the computer program and the computer itself which allows the program's functionality to be realized provided that a useful, concrete and tangible result is realized. See U.S. Patent 5,710,578 to Beauregard et al.

Non-Functional Descriptive Material

- *per se* is not statutory i.e. abstract idea
- Not statutory even if in combination with a computer-readable medium
  - ❖ No useful, concrete or tangible result is produced

Examples of Non-Functional Descriptive Material

- Music
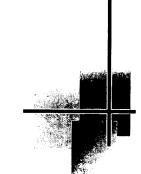- Literature
- Art
- Photographs
- Data base *per se*

- Mere arrangements of facts or data
- Share price on a disk

These are merely stored to be read or outputted by a computer without any functional interrelationship, and thus do not impart functionality to the computer, i.e., they are not computer components.

Examples of Non-Functional Descriptive Material *per se*

Sample Claim 1

A warranty comprising:

a first section describing what is covered by the warranty;

A second section describing what is not covered by the warranty.

A warranty is just descriptive material *per se.* The same applies for claim language such as "A contract comprising..." , and "An invoice produced by a computer, the invoice comprising..." The claimed invention taken as a whole does not <u>produce</u> a useful, concrete and tangible result.

Examples of Non-Functional Descriptive Material

Sample Claim 2

A data structure encoded on a computer readable medium comprising:

A first field having data of the age of a customer; a second field having data describing the products the customer buys; and a third field having a numeric value indicating the likelihood that the customer would buy similar products.

This is simply a data file – no functional change occurs when an application program uses the structural data. See *In re Lowery.*

Data Structure – Definition

A data structure is a physical or logical relationship among data elements, designed to support specific data manipulation functions. See The New IEEE Standard Dictionary of Electrical and Electronics Terms 308 (5th Ed. 1993).

Signals

IEEE has a plurality of definitions of a signal that include:

- A physical embodiment of a message
- A physical representation of data
- The physical representation which conveys data from one point to another

*Note that these definitions require a physical existence, however, physical existence does not equal physical structure

Signals
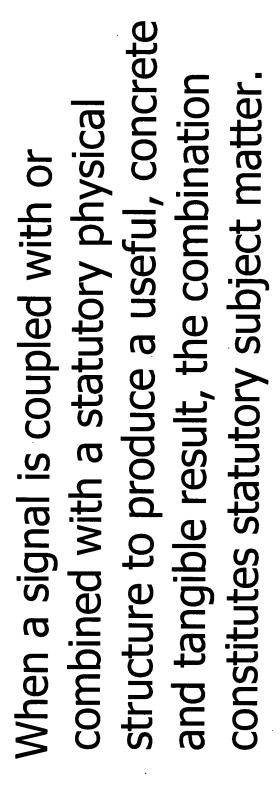
- Signals *per se* are not statutory subject matter.

- The combination of signals with statutory physical structure may be statutory subject matter if a useful, concrete and tangible result is produced. See Koo Patent, U.S. Patent Number: 5,568,202.
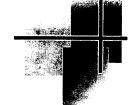
Signals *per se*

- Have no tangible physical structure
  - ❖ a signal that is not tied to any physical structure for transmitting or receiving the signal

- Do not perform any useful, concrete and tangible result

- Do not constitute a tangible physical article or some form of matter
  - ❖ a signal that does not have any physical characteristics

Signals

When a signal is coupled with or combined with a statutory physical structure to produce a useful, concrete and tangible result, the combination constitutes statutory subject matter.

Signal Claims

Does PTO grant patents on signal claims?

Koo patent

- *U.S. Patent Number:* 5,568,202
- *Title:* System for Echo Cancellation Comprising an Improved Ghost Cancellation Reference Signal
- *Inventor:* David Koo
- *Assignee:* North American Philips Corporation

Koo Patent Claim

Claim:

- An electronic reference signal in a system for minimizing the effects of ghosts occurring during the transmission and reception of a television signal over a communications path, wherein said reference signal is embodied in a processor readable memory, is non-cyclic, has a substantially flat frequency response within the bandwidth of said communications path and has a plurality of substantially uniform amplitude peaks over a time interval, and wherein a replica of said reference signal is transmitted as part of said television signal and is utilized by a decoder to derive coefficients which are used with at least one filter to remove said ghosts.

Koo Patent (Continued)

Prosecution History of Koo Patent

- Board of Patent Appeals and Interferences affirmed examiner's rejection of two-hump signal claims as being non-statutory under Section 101.

- Koo appealed to the Federal Circuit

- Case remanded to PTO to permit Koo to amend claims to incorporate signal in computer-readable memory

Signal Example

Claim 1

An assembly of transmitted signals wherein said signals carry encoded instructions to be read by a receiver; said assembly of signals arranged to be transmitted to a receiver.

Claim Analysis

The claim calls for an assembly of signals *per se* and is nonstatutory. The scope of the claim only <u>intends</u> the signal to be transmitted to a receiver – there is no combination of the signal with statutory physical structure (the transmitter is not actually claimed)

Signal Example

Claim 2

A reference signal containing an arrangement of information; said reference signal is embodied in a processor readable memory.

Claim Analysis

The example <u>may</u> be statutory if the signal is in combination with a physical statutory structure (the readable memory) and a useful, concrete and tangible result is provided. Claims to data structure (signals) stored in a memory are statutory subject matter because of the statutory nature of the memory. *In re Lowry,* 32USPQ2d 1031 (Fed. Cir. 1994).

How Case Law has Changed

In re Schrader., 30 USPQ2d 1455

(Fed. Cir. 1994)

Case Summary in 1994 Decision

The claims in Schrader are directed to a method of competitively bidding on a plurality of related items, such as contiguous tracts of land. The CAFC concluded that the claims were properly rejected for lack of statutory subject matter under Section 101.

The CAFC in *Schrader* Stated....

Their reasoning being that a mathematical algorithm was implicit in the claims which, even though it may not have implied any more than a step of summing, describes the solving of a mathematical problem and since the algorithm is not applied to or limited by physical elements or process steps, no physical change, effect or result occurred. Thus, this was insufficient to impart patentability. See *Schrader.*

Then State Street Came Along...

After the 1998 *State Street* decision, the CAFC in *AT&T v. Excel Communications*, 50 USPQ2d 1447, 1453 (Fed. Cir. 1999) took the opportunity to comment on the Court's prior decision in *Schrader*.

The CAFC in AT&T Stated...

The Court in *Schrader* did not focus on "whether the mathematical algorithm claimed was applied in a practical manner since it ended its inquiry before determining whether a **useful, concrete and tangible** result ensued. Thus, in light of our recent understanding of the issue, the *Schrader* court's analysis is as unhelpful as...". See *AT&T v. Excel Communications*, 50 USPQ2d at 1453 (Fed. Cir. 1999).

Useful, Concrete and Tangible is the Test

The Bottom Line:
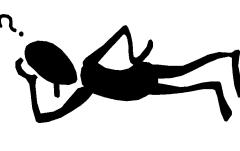
Useful, concrete and tangible is the current test for satisfying the practical application requirements of Section 101 with respect to computer-implemented inventions.

Use the 101 Help Panel

If you have any questions – ask the 101 help panel!